Community Conversational: Supporting and Capturing Deliberative Talk in Local Consultation Processes

Community Conversational: Supporting and Capturing Deliberative Talk in Local Consultation Processes

Ian G Johnson[1], Alistair McDonald[2], Jo Briggs[2], Jennifer Manuel[1], Karen Salt[3], Emma Flynn[4] and John Vines[2]

[1] Open Lab, Newcastle University, Newcastle upon Tyne, UK, i.g.johnson1@newcastle.ac.uk
[2] Northumbria University, Newcastle upon Tyne, UK, {firstname.lastname}@northumbria.ac.uk
[3] Nottingham University, Nottingham, UK, karen.salt@nottingham.ac.uk
[4] Durham University, Durham, UK, e.g.flynn@durham.ac.uk

ABSTRACT

The development of platforms for community decision-making has been of growing interest to the HCI community, yet the ways technology might be woven into traditional consultation processes has been under-studied. We conducted fieldwork at consultation events where residents were invited to discuss and map assets related to their neighbourhoods to inform community decision-making. The fieldwork highlighted problems with equality, turn taking, the evidencing and elaborating on opinions by residents, and challenges related to capturing and documenting the events. We developed Community Conversational—a hybrid table-top game and digital capture and review platform—in response to these issues. Community Conversational was designed to provide a flexible structure to consultation events related to 'place', and support the production, capture and review of deliberative 'talk' to support decision-making. We study how the platform was used in two consultation events, and discuss the implications of capturing and evidencing local people's opinions for the accountability of decision-makers and community organisations.

Author Keywords

Deliberation; civic technology; consultation.

ACM Classification Keywords

H.5.m. Information interfaces and presentation (e.g., HCI): Miscellaneous.

INTRODUCTION

The field of HCI has recently witnessed a 'Civic Turn' [34] and a flourishing interest in the configuration of socio-technical systems to support civic engagement and community action. Work in this space has included the creation of tools to help communities express local matters of concern [63,64], the use of crowdsourcing in city planning and management [16,43,49,50] and the design of voting technologies to facilitate local consultation and decision-making [36]. A common characteristic of this work is that it is founded and reliant upon collaboration with public authorities (e.g. [16,26,27]), community social change organisations [2,64], campaign groups [13], charities [17], or other organisations dedicated to building civil society (e.g. [34]). Particularly important in this context is that many governments and local authorities (LAs) now devolve certain decision-making powers, such as the allocation of public funds or neighbourhood planning, to community representatives and organisations. It is therefore timely to look closely at the ways in which communities and residents are supported, consulted on and engaged in such processes, and the role technology might play in supporting meaningful discussion and action around local matters of concern.

Our paper reports on a study involving three communities invited by their respective local governing representatives to engage in processes of devolved decision-making. Residents from each of these communities were invited to participate in consultation events intended to influence these processes. The research was subsequently planned over four cumulative phases: (i) fieldwork at three initial consultation events hosted by a community organisation that had been assigned community funding responsibilities by government; (ii) the design of *Community Conversational*, a 'talk-based' table top game that aimed to promote more deliberative forms of conversation through turn-taking and digital capture functions; (iii) the deployment and trialling of *Community Conversational* at two further consultation events; and finally (iv) evaluation of the game and captured data with community representatives tasked with leading on devolved decision-making processes.

This paper contributes to the HCI literature on civic technologies in three ways. First, while prior work has focused on the role of novel technologies to elicit lightweight feedback in place [37,54,62] or moves traditional decision-making systems to digital platforms [27,59,65], our approach focuses on soliciting, structuring and capturing rich discussions about 'place' from multiple individual perspectives. Second, we demonstrate how community-generated data is a powerful resource which is at risk of being re-presented to support an organisation's agenda, while

CHI 2017, May 06-11, 2017, Denver, CO, USA
ACM 978-1-4503-4655-9/17/05.
http://dx.doi.org/10.1145/3025453.3025559

implying accountability and impartiality. Third, based on these issues we offer reflections on the roles community organisations play in such civic technology deployments.

BACKGROUND

Our research is conducted in the context of ongoing changes to decision-making processes in the United Kingdom (UK). In the UK, central government has been devolving power and responsibilities to LAs, which in turn are looking to resident and community groups to take over certain decision-making responsibilities. Acts of Parliament, including the Localism Act (2011) [18] and Community Empowerment Act in Scotland (2015), commit local governments to actively engage communities and residents in public fund allocation and neighbourhood planning. LAs are thus motivated to both organise and document consultation processes. This recent legislation follows on from the transnational, ideological and political shift towards localised decision-making. For example, the *Bydelsråd* experiment in Copenhagen [3,32] and India's *Panchayati raj* system [33,66] of hyper-local governance [4] build on participatory budgeting exercises that originated in Porto Alegre, Brazil [45]—the latter being part of a progressive program to address extreme social disparity and to give all citizens a say in the allocation of public spending. In the UK, *Big Society* and the so-called *Northern Powerhouse* are examples of politically-motivated ideological concepts of 'localist' politics [60].

While devolved decision-making is often presented as helping to promote democracy, underlying these policies are significant economic drivers, creating a "political parallel" [60]. In recent years, the UK—like many European nations—has experienced a period of 'austerity' and shrinking LA budgets. One response has been to support communities, social innovation companies and local groups to 'do it for themselves'. Public buildings and spaces (e.g. libraries, swimming pools and parks), services that enable care in the community, and public health initiatives, have until recently been widely provided by LAs in the UK. However, LAs in recent years have become increasingly reliant on civil society and the voluntary sector, a trend that is expected to continue in line with ongoing public spending cuts. As such, these Acts present an opportunity to 'empower' communities and citizens, while relieving civic authorities of unsustainable costs.

In this paper we closely examine how these political motivations are playing out in three communities. Our work looks at how community organisations and representatives who have been devolved certain decision-making powers manage new responsibilities to oversee local consultation processes, to document these, and to report back on specific decision-making activities. Given this growing interest in community decision-making, it is unsurprising that there has been increased interest in the design and study of technologies to support such processes. There has been a vast amount of research aiming to translate aspects of traditional democratic processes into digital form, for example by digitising voting and petition systems [37,63,64] or providing platforms to give feedback and opinion online [16,33,48]. HCI research in this area has been successful in opening up traditional consultation practices to wider audiences—making engagement richer [27], more playful [26] or accessible [38]. While work in this area has inherent value, it comes with certain political limitations in the context of local decision-making; it proposes systems that reinforce representative partisan politics, while failing to identify whether, and if so how, engagement (e.g., leaving a vote, commenting an opinion) really influences decision-making and outcomes. There are however examples of HCI research that have approached the issue of local decision-making with a different outlook. These include systems designed in response to notions of deliberative democracy [28,36,39,56,59] and research on discursive forms of civic engagement [14,15,20]. These works typically represent non-traditional and more deliberative means of political engagement, which have been described as 'not less democratic, but democratically different' [51,52].

Deliberative democracy champions 'talk-centric', rather than 'vote-centric' processes [10]. Here decision-making is not concerned with measuring citizens' existing preferences, but with discursive processes involving listening, justification of position and demonstration of mutual respect, where citizens reflect upon, evaluate and perhaps revise initial preferences [61]. Notions of deliberative democracy have had some resonance in HCI e.g. through processes that are enabled by online platforms including social media [11,57,58] or through deliberation platforms [59,68]. However, it has been highlighted that online platforms tend to polarise views [44,47], or become 'echo chambers' [35] (c.f. [56]) of political viewpoints and competing claims. Meanwhile, there are issues of trust related to 'e-participation' [53]. Other studies on talk-based forms of political engagement in HCI [14,15,20] have explored ways of enabling and promoting directed political discourse—and what it means to capture and interrogate this talk. However, despite an important focus on civic action, this work is without a purposeful link to decision-making, decision-makers or social or political outcomes.

THE CONTEXT: COMMUNITY CONVERSATIONS

Our research took place across three sites in Northern England: *Fenting*, *Darrenton* and *Church House* (pseudonyms for the purposes of reporting the research). Each of these sites was a small suburban or semi-rural town or village involved in ongoing decision-making processes around the funding of local projects, services, or new building developments. Community organisations working with their respective LA were overseeing a series of explorative 'community conversations', each involving between 10 and 30 local residents. These events typically revolved around 'asset mapping' activities. Organisers would arrange residents into small groups, each of which would congregate around a large paper map of the local area. A facilitator for each group would then invite residents in

turn to talk about the 'local place', share information on the places they visit or avoid, and reflect and comment upon particular service availability. The sessions were initially structured around a scenario in which residents were assigned the role of 'local expert' helping fictional new residents with information on local places, people and services. Residents were invited to use three types of sticky post-it notes to indicate on the map particular assets (places, services or people) and, equally, anything that they thought that was missing in their area.

The results of these activities from the community conversations were intended to feed into different decision-making processes at each location. In *Fenting*, where four events at different locations were held, the lead community organisation was working with two residents' associations to invest £90,000 of privately attained and publicly matched funding. The events were thus structured to help allocate this money between enhanced local infrastructure or subsidised services. In *Darrenton*, the community organisation worked with the Parish Council (the lowest level of local UK civil government) to consult with residents on a neighbourhood plan. A neighbourhood plan is a new policy tool which aims to support community organisations and volunteer groups design local policies which feed, by statute, into the LA's planning strategy. Here a single community conversation event was run as part of a wider consultation. Finally, in *Church House*, the community organisation worked with a range of local voluntary organisations and residents' groups. Here the aim was to develop support for various new community services. Residents were positioned as 'local experts' to map out facilities and services, sharing information across both towns with the aim of co-generating a joint-funding application to a funding body.

While there was a multiplicity of issues to be discussed, informed and decided upon, all of these community conversation activities shared important qualities. First, the community organisations had a responsibility to involve local residents in consultation activities, to evidence this, and to demonstrate how their views and opinions were accounted for in any decisions made. Second, each of the community conversations was intended to facilitate discussions between residents to identify and articulate issues of local importance. As such, political deliberation would be one way of scaffolding and supporting this process. Further, the individual community conversations were representative of an increasingly common scenario where 'grassroots' or volunteer-led organisations are entrusted to take over consultation exercises (and ultimately, assigned responsibility) around local matters of concern. Our initial observations quickly highlighted that the consultations involved 'making up the rules' in the absence of relevant support or training from LAs. It was also apparent that while research language was being used ("methodology", "scenarios", "data" etc.) the asset-mapping method led to relatively few easily documented insights. For example, the sticky post-it notes attached to the maps by residents, indicating particular concerns, were cleared away between sessions. Major challenges concerned a lack of resources and research experience necessary to support the capture and analyses of the rich data, generated during each community conversation. Our involvement in these processes came about through an invitation from the lead community organisation, a group with whom we had worked with on previous projects. Primarily they were seeking our support with event planning, commenting that they lacked the necessary discussion facilitation and recording skills. Our initial role was as 'critical friends' to advise on their initial plans. However, this soon extended to supporting explorations around ways of documenting the community conversations and facilitating a more formal project. In the following we provide an overview of our study design, and present findings from our initial fieldwork.

OVERVIEW OF STUDY DESIGN

Our initial research questions focused on: 1) understanding how community conversation events, as examples of community involvement in local decision-making, were facilitated and documented; 2) examining the dynamics between different participating community members; and 3) exploring what role, if any, digital technology might play in these processes. The first stage of our study involved ethnographic fieldwork at the four events in *Fenting*. This initial fieldwork was conducted by the lead author, and involved them engaging in participant observation [67]. The researcher took field notes guided by the research questions and on observed interactions between organisers and residents. The second stage of the study involved exploring the design of tools informed by the initial fieldwork. The subsequent tool we created—*Community Conversational*—focused on supporting fairer event facilitation and data capture, and provided a means to document the events in ways that might be useable as evidence for decision-making. The third stage involved trialling the tool at events in *Darrenton* and *Church House.* These events were organised by the community organisations who used their own networks to invite local residents. During these events, audio and video data were captured, while three researchers took observational notes while also supporting groups at the various tables when appropriate. The sessions were otherwise led by the community organisations. Finally, we conducted two evaluation workshops with representatives of the organisations that ran the events. These workshops provided the opportunity for the researchers to ask general questions about the events, as well as gather feedback on the value of the *Community Conversational* tool and the data it captured. Here participants reflected on the community conversation events that they attended through a range of data (audio, transcription and video data). Through these discussions we were able to discuss and evaluate how they might use these data and our tool in their consultation and decision-making processes.

In the following sections we discuss in detail these four stages of our study and the associated findings.

Figure 1. (a) Prompt Cards, Protect and Main Markers (b) Camera set-up during game (c) Software Interface

Findings from Initial Fieldwork

The first stage involved ethnographic fieldwork at four community conversation events in *Fenting*. Our fieldwork from these events highlighted clear issues with the *capturing of the conversations*, and the documentation and evidencing of concerns raised. As already noted, activities relied heavily on the use of sticky notes, on which the residents wrote about a specific "asset" before anchoring it to the map at a relevant location. Invariably, the notes were difficult—if not impossible—to decipher. Further, they mostly identified *objects* (e.g. 'doctors surgery') rather than offering reflective detail on specific *matters*. Organisers took care to record the notes photographically at the end of each session, before peeling the sticky-notes off in preparation for re-using the maps, while facilitators took notes during the discussions to mitigate against losing richer contextual detail. However, they were doing so while managing the conversations, some of which they later described as '*boisterous'*, and involving '*tricky subjects'*. Furthermore, unpredictable attendance numbers meant that facilitation could involve managing multiple tables (some events attracted many more residents than expected).

Another issue centred on providing *equal opportunities for talking*. It was common to observe residents speaking over each other, or to start break-out conversations. People appeared uncertain about when it was appropriate to speak or interrupt. On two occasions, the quality of discourse reduced to arguments concerning facts about the local area. As a result, both participants and facilitators missed much of what was being discussed. Some facilitators took a strong stance against cross-talk, though the less experienced ones struggled to manage multiple conversations. This led to further issues with some residents *dominating talk* and expressing their own concerns while disengaging from those affecting the whole community. For example, at one event, a residents' association turned out *en masse* to express a single issue and make their point on record. As such some conversations involved well-rehearsed statements while other residents did not get the chance to speak. The dynamic on some tables clearly left people feeling uncomfortable and visibly excluded from the conversations.

A final issue identified was that residents were relatively limited in *evidencing* or *elaborating on their opinions and points of view*. People did not sufficiently explain their choices relating to a particular place, person or service; often they would simply place a sticky-note on the map. The organisers told us the level of explanation that was most useful to them was more likely to come up during the one-on-one conversations that occurred around the event. This resulted in residents and community organisations missing out on valuable insights from 'local experts'. Interestingly, this led to further issues with the *legitimacy of the record of the event*. While note-taking was considered an important vehicle for capturing opinions on paper, there was a concern that these would be misrepresentative or poorly documented. Therefore, the "visual" documentation was privileged as better representing "evidence", despite photographs of the maps lacking contextual detail. In discussion facilitators reflected that these represented a better record of engagement than their notes. However, the lack of accurate data, together with concerns around their representativeness, undermined the value of the conversations in informing decisions at a higher level. Further, making sense of and re-presenting these data proved problematic for community organisations; first, they were unsure whether to feedback on workshop outcomes to resident-participants, despite wanting to be accountable to them; and second, they were unclear about what form this feedback might take.

DESIGNING COMMUNITY CONVERSATIONAL

As a response to this initial fieldwork in *Fenting*, we designed *Community Conversational* which has two distinct parts: (i) a conversation based 'game' intended to encourage and structure conversations about 'place' without overly restricting and directing it (*fig.1a*); and (ii) a digital platform that captures data around each table, then represents these on screen (*fig.1b* and *1c*). The interface then enables workshop organisers to search and filter down through the data, with the aim of supporting data representation, analyses and the organisers' understanding.

Community Conversational game

The game builds on a lineage of game use in participatory governance (e.g. [46]) and participatory design and co-creation (e.g. [6,7]). We were interested in the ways turn-taking games might promote the structuring of discussion and provide social cues for conversation. To enable this the game was designed to comprise a deck of physical prompt cards, a paper map of the area to be discussed, markers (which essentially replace the sticky post-its) and some simple game mechanics. Together, these components help to structure a *Community Conversational* event. The event is then captured via video camera (see *fig.1b*) that enables

tracking of individual markers as they are moved across the map (see below).

Prompts Cards and Markers

46 unique prompt cards and four identical "protect" cards were created across three categories (*move*, *talk*, *protect*). *Move cards* prompted participants to move the *main marker* to a new location in response to printed instructions. These either (i) invited discussion on a new topic: *"Move the marker to a place you visited in the past but no longer do (and explain)"*; or (ii) asked for a comparison to be made with the topic currently being discussed: *"Move the marker to somewhere that is more accessible."* The second set of cards were intended to provoke and challenge participants, and to move the discussion away from pre-determined or dominant topics. *Talk cards* prompted participants to reflect on another issue related to a place under consideration. For example: *"Talk about what you would change at the place the marker is currently at"* and *"Talk about the best time to visit the place at the marker."* These cards presented opportunities for other players to find out something new about a particular location or change the content or tone of the topic. *Protect cards* are associated with the *protect markers*. At the start of each session participants each receive a protect marker which they place on the map to indicate somewhere they would like to protect from change. Throughout the "game", should they pick up a protect card, they may move any one of the protect markers to a place they would prefer to be "protected". They may move another participants' protect marker or add extra protection to somewhere already marked. The protect cards and markers were designed with a dual purpose. First, to help ascertain and communicate community members' asset priorities. And second as a response to observations from our fieldwork which revealed that many residents focused discussions on protecting either their own homes, or one particular issue within the town. As such, the protect markers intended to disrupt narrow or dominant conversations and enable wider, perhaps less subjective yet important issues to be discussed. Our intention was that they allowed people to talk about their own 'self-interest' while also serving to stimulate a more deliberative process.

Mechanics of the game

After a brief introduction by the facilitator and researcher, the participant-residents are invited to sit around a table on which a map of their town or village is laid out. The 'rules', which are simple and designed to support turn-taking, are introduced to the room. Then everyone introduces themselves and places their protect marker on the map, explaining their decision to the rest of the table. The main game then proceeds during which participants take turns to take a prompt card from the top of the pack, read it aloud, and move the main marker or one of the protect markers to their location of choice, explaining their action. The prompt card is then discarded. The materiality of the card pack establishes clear turn-taking between speaker and listeners. Once a participant has explained a choice, their turn is "over". This notion of turn-taking was designed to eradicate the need for facilitation, which was found to be problematic and inconsistent. Despite not entirely replacing the facilitation role, early findings suggest that facilitators using *Community Conversational* take a less prominent role, are freed up to manoeuvre between tables, note-take, or speak to others in the room. *Community Conversational* also acts as an effective "leveller", across tables and between sessions.

Community Conversation Software Interface

The software is a data mining tool that can be used to filter down and quickly review sections of the audio-recorded transcribed conversation and video data. It allows selected themes from multiple conversations to be found quickly, across what is a significant corpus of video and audio data. Following each event, the video and audio are uploaded onto the system; meanwhile a visual tracking algorithm is run against the video and the marker locations identified to record their movements across a master timeline. Other meta-data can be added, such as transcripts (of the audio) or external prompts. The software can then be "mined" to explore e.g. events, such as when a question is asked or when markers were moved. The master timeline is represented on the screen alongside a video window which provides graphical information on the marker locations at specific points in the video/conversation (see *fig.1c*). The master timeline can be filtered to create a new timeline visualising multiple selected actions displayed adjacent to each other enabling quick comparison (see *fig.1c*). Searches can be made by e.g. the prompt question, by geographic area as selected on the screen, or via free text search of the transcript. Thus overlapping data and unusual anomalies can be identified quickly. By clicking on a time bar, the video footage will move to the specific place for easy review.

TRIALLING COMMUNITY CONVERSATIONAL

We conducted a series of trials of *Community Conversational* as part of the ongoing consultation processes being led by our community partners. These events were held in *Darrenton* and *Church House*, and involved 77 local residents (26 in *Darrenton*, and 51 in *Church House*).

Following the events, we ran two evaluation workshops with representatives of the organisations involved in running the consultation processes and overseeing the production of reports to communicate community decision-making. For *Darrenton*, this involved meeting with three members of the neighbourhood planning board, including the chair. In the case of *Church House*, we met with two representatives of the collaborating community organisation and an additional consultant working on an evaluation of their consultation activities. This second workshop followed the *Church House* event, but as this organisation had been involved across all of the community conversations, they were able to reflect more broadly on the platform's use, and potential value, across contexts. At these workshops we invited the representatives to discuss their experience of the events, and to reflect upon how events involving the use of *Community*

Conversational compared to other consultation events they had run and participated in. We demonstrated the software interface to navigate the data captured from the event. The intention of these workshops was to also guide the participants through the use of the software interface to explore data collected from the events they took part in. However, during the workshops it became clear that some of the participants were more comfortable with the researchers using the interface on their behalf, with participants guiding our interactions and the type of data we searched for and presented on screen. At the end of the workshops we opened further discussion around the value of the data collected as part of community consultation events, and who should have access to it.

Each of the *Community Conversational* events (individual tables playing the game) and evaluation workshops were audio recorded. These recordings were then transcribed for analysis. At the *Community Conversational* events, the research team took field notes focused on the ways residents responded to the game and interacted with one-another. All transcripts and field notes were treated as a corpus and thematically analysed [8]. While we engaged in open-coding of data at the sentence to paragraph level, our analysis was specifically oriented towards identifying examples of and opportunities for supporting more deliberative forms of talk.

FINDINGS

Our analysis of the data led to the construction of eight themes, discussed in the following sections.

Suspicions and Easing into the Game

From the start of our first *Community Conversational* event, there was concern from organisers and decision-makers around how people would respond to being asked to play a turn-taking game. Members of the Parish Council in *Darrenton* felt that *"people naturally do not like to sit and play what they would class as party games on what they see as a serious subject"* (D4). Other Council members expressed dislike of "*gamey type things*" and *"were a bit sceptical"* (D6). The technology was also assumed to have an unwelcome impact on the content and quality of the discussion by restricting what people would be prepared to talk about. Again, this was voiced as a particular concern from Parish Council members. In this case they considered the video hardware as particularly intrusive and potentially unsettling: *"a camera sitting there. That really, I think, rattles people a bit, unless they're used to doing it"* (D4). Further, an element of awkwardness was to be expected at the start of any participatory group activity involving learning rules, and this could have been exacerbated by the presence of the recording technology. However, observing residents' behaviour during the sessions showed that after some initial hesitation the vast majority were very happy to take part. F2 (who was one of the organisers in *Fenting*, *Darrenton*, and *Church House*) noted: *"the* […] *holding back slightly for a few minutes didn't last long, and then they just got into it"*. Further, by focusing on taking turns and selecting and responding to prompts, any social awkwardness in the presence of capture technologies seemed to be forgotten:

> *"They were more interested in expressing their opinion and doing what was needed, really. They liked the idea of picking up the cards, saying things, and plotting the different things, and they just forgot about the rest of it."* (F2)

Therefore, despite the fears that the presence of the technology or a "game" would upset residents, it was overall received well. As F3, (the consultant evaluating the events for the funders), reflects:

> *"They enjoyed it far more than the consultations they had had previously. So there was something very different about the nature of the consultation, the map, the cards."*

Taking Turns and Steering Conversation

There was some doubts whether the residents would follow the turn-taking rule. While, as anticipated, some people turned up with pre-rehearsed issues, in practice people appeared compelled to 'comply' with the 'rules'. During the conversations, residents acknowledged that the cards were framing their topics*: "I'm going to hope to get a word in about* […] *hopefully it will come up in one of the cards."* (DP17). In other cases, some residents articulated that the game structure mitigated against the discussion going off-topic or focusing too much on a specific community asset: *"You haven't let me wax lyrical about the scout hut, where I spend half my life"* (DP5). As such, the cards and turn-taking kept conversations on-topic. In *Darrenton* a resident mentioned the medical centre in a conversation about transport and were quickly reminded by another resident of the rules: "*Well I think we will get a chance further down the pile* [to discuss the medical centre]*, mightn't we?"* (DP12). This balancing of the conversations was appreciated by the organisations tasked with promoting these new decision-making processes. They recognised that people at previous events had *"pushed"* for a particular issue and would *"take every opportunity to keep raising it"* (D4). The simple mechanics of the game appeared to prevent this:

> *"You made everybody say something. If you'd sat in the hall and said, "What do you think about this?" Two or three people would take the whole conversation. Somebody would have said nothing."* (D4)

Meanwhile, the serendipity of the card topics kept people engaged. If their "*burning topic*" had not already arisen, opportunity was still there for it to appear. However, this steering of the discussion by the cards did raise some concerns from some residents, especially as events progressed and fewer opportunities remained to discuss a particular issue. In one case, a resident felt compelled to raise a particular timely issue about the *Church House* estate. They intervened, blaming the cards for restricting them in raising this matter of concern: *"to me, the one thing we've never touched on because of these cards"* (CP14). Indeed, it was quite common across different groups during the closing stages of the game that space would be made to capture additional, un-articulated, issues: "*I thought we didn't mention about more shops. I think we need more shops you know"* (CP39).

Explaining and Elaborating Viewpoints

From the perspective of the facilitating organisation, the system was generally very successful in prompting people to explain their reasoning. Each card prompted residents to explain 'why' they had selected a place to move the marker, and in practice this happened more than we had envisaged. This was also surprising for the facilitating organisers, who noted they had to do much less prompting, and instead just remind people of the rules: *"Well, this is how it works, just to get people started"* (F1).

Perhaps unsurprisingly, people often explained the places they marked in reference to personal observations: "*I think that it's necessary to have it in the village for older people who haven't got transport really. They certainly can't get a bus* […] *so I think it's very necessary we have one here"* (DP26). On other occasions residents would ask each other to explain and elaborate on the reason for a move. In one series of interactions, a resident moved a marker to a specific place for a second time. They gave the same reasoning as before (that it is a big problem in the town). At this point, another participant affirmed their view but also encouraged them to consider alternative locations: "*It is really. If that is a fait accompli* [decided and cannot be changed] *or is there anywhere else where you would like to protect?*" (DP20). Sometimes this manifest as contestation: *"Oh Really? […] Is it used?"* (DP26), but still served the purpose of encouraging further elaboration or explanation. On discussing examples of participants being able to question, offer advice, and challenge each other, organisers reflected that it added some value to the conversations: *"And somebody else chipped in and said "Well, what about this?"* […] *So I think it created a different dynamic. It felt, in a sense, more rigorous to me"* (F1).

Changing Opinions and Engaging with Others

In addition to participants challenging one another, there was clearly a respect for, and better understanding, of competing claims, which is one of the expected outcomes of deliberative talk. During the game, residents showed a willingness to listen to and even empathise with alternative views on issues, and take these into consideration during the game. For example, one resident explained that someone else's view had influenced where they moved their marker: *"I think that's a very good point, I do think we're short of what we can call communal spaces in the village and for children, it's very important."* (DP23). This in turn prompted another resident to reflect on their own views and raise an issue that had not yet been discussed: *"I never realised it must be difficult to live here and have children because it's not geared up to children, is it, the village?"* (DP21).

In designing the mechanics of the game we intended to create an environment where every resident could have opportunities to talk. One outcome of this was how, in supporting participants to open up, they built on others' views during their turn. Almost every turn involved a conversation with different options. In some cases, this influenced someone's topic or softened their hardened view on a subject. A further unforeseen practice of the game was participants passing on their prompt. One resident, when prompted by the selected card to talk about somewhere they would take a visitor, asked other residents on the table to make suggestions: *"Well, I know where I would go but it's quite a wee while since I've been. But I'll leave it up to other people if they want to say."* (DP15). These dialogues, in which residents changed opinions, listened to others and even passed on opportunities to the rest of their group, were a notable contrast to the discourse in the earlier *Fenting* events, where talk comprised of people making statements.

The Audience of the Conversation

From the perspective of the residents, it was clear that these events were different in nature to previous consultation events they had attended. It was not just the use of an unusual structure and different materials that made the event strange to them, but also the greater attention the events were seen to have from external bodies (such as the team of researchers from the two local universities). This created a sense of importance and significance to these events compared to those previously held in the local area. This was amplified by the presence of the technologies that, self-evidently for many of the participants, were capturing what they said. These factors combined to create a 'buzz' around the event and a sense that the issues raised from the conversations might *"actually be going somewhere"*. There was certainly a sentiment that in previous events the opinions voiced had not been captured well.

During the events, residents asked explicitly who would hear their opinions. In some cases, they requested that specific bodies be sent the conversations that were captured: *"Can the Parish Council have a copy so that they can include it in their, whatever they are sending in to?"* (DP7). While it was only intended to be a means for tracking the markers on the map, the video camera was considered by some to be a direct link to the civic authority, and was used to make requests. At several points during the two events, residents would elaborate on a specific issue being raised and talk directly to the camera: *"*[Turns to face camera] *I think the council could look after the grass better. I don't like the way they leave all the grass lying there. It should be swept up."* (DP21). This was also observed by members of the community organisation running the events as they reviewed the data: *"People thought that the camera might help them to emphasise a point that they felt annoyed about, they spoke directly to camera."* (F3).

Supporting Facilitation for Organisers

We observed in our earlier fieldwork that those who ran the previous events often struggled to facilitate tables alongside documenting points raised and overseeing the general running of the event. In this case, *Community Conversational* was seen to take on *"the role as facilitator for us"* and those who might normally be the facilitators were able to "*mostly take a step back"* (F1). It enabled them to not worry so much about ensuring people were not talking over one-another as the game somewhat inhibited that. Instead they could focus on noting down particularly interesting points that were raised, moving between tables to see how different group

dynamics work, and keeping a better eye on timings and schedules. The facilitative role *Community Conversational* played was further appreciated due to the unpredictable numbers of attendees that come to such events as well, which can stretch organisers across multiple tables and groups.

It was felt that, initially, some form of organiser facilitation was still necessary for each group. This would be so that initial rules and expectations could be set and—if necessary—to bring attention to the game if conversation gets side-tracked. However, it was noted that even if a facilitator was not present, or unable to guide discussion, to some degree the game filled this gap:

> *"There was one table that was poorly facilitated, for various reasons. If you hadn't had this method, it would have failed completely. So you know, I think that was really interesting to watch that. They still had a useful conversation with minimal facilitation, so, yes."* (F3)

There were further reflections on how the community organisation that was leading this series of events had very little experience of running consultations previously. While they had many connections with community and residents' groups and LAs, they recognised that prior to the events they had little knowledge of what would create and support a meaningful group discussion. They acknowledged that this was quite common, as organisations like theirs are given responsibility to oversee these processes:

> "*It's almost like saying, "Who have we got around the table who's got a bit of nous* [common sense]*" really. Do you know what I mean? With no formal expectation, and certainly no formal training, or only some briefing.* (F1)

It was felt a simple tool like *Community Conversational* would support organisations like theirs, with limited resource and expertise, to facilitate meaningful and enjoyable events. It was valued due to its perceived simplicity:

> *"I can't quite get my head around it.* […] *we ran a series of consultations, and we had people talking around maps for a couple of hours. It can sound kind of quite simple* […] *so what was the big deal?"* (F1).

While the facilitative role of the game and technology was appreciated, it was still considered that the game needed careful framing and explanation to those participating in the event. This was considered particularly important by the Parish Council. They noted that their involvement in the event was critically important in relation to the potential action that might be taken around the neighbourhood plan: *"we knew what was going to happen, and knew what we were trying to do."* Therefore, in materials related to the event and at the start of the event itself they carefully framed what its purpose was, why it was being held, and what they were trying to do next: *"I think, otherwise, it* [the event] *would have been a bit stiffer or stilted."* What comes through here, is that while *Community Conversational* itself was valued as a means of structuring and equalising talk between residents, the bigger picture and purpose of its use still needed careful articulation and framing by those organisations responsible for its use.

Opening Up and Bounding the Conversation

The qualitative, 'talk-based' nature of the consultation meant different things to different stakeholders. It was clearly valued by many of the residents who took part, where the turn-taking supported equality and inclusivity from those that were there, but came across as convivial and not overtly processional. The community organisation running the events greatly valued the conversational data: *"Looking across, you could see by people's body language* […] *they're leaning forward, they're really engaged"* (F3). In particular, they valued the fact that the conversational nature of the events meant that they captured a more holistic*, "big picture"*, of what is valued and significant in the local area:

> *"Lots of planning consultations seem to be very restricted, especially around roads and things. So what you're getting with some consultations* […] *it's the concentrating on one area, and the big picture, widening the view* […] *is not being asked. It's not even being touched on."* (F2)

The relatively open-ended nature of the conversations surrounding the *Community Conversational* game was also valued as it gave space for residents to talk about what was important to them: *"The opportunity to have a facilitated discussion, instead of having it bound by and driven by council officers. So I think that was really striking"* (F3). However, this richness came with a cost, especially for the Parish Council who were in charge of the neighbourhood plan in *Darrenton*. Upon going through the conversational data collected from their event, they noted that while the captured talk was useful "evidence", they would not find the qualitative data useful in coming up with decisions. Instead they privileged lists and statistics:

> *"You could say that,* [out of] *however many people went to the event, how many of them, or how many tables, mentioned the doctors'?* […] *Even if it was just a bar chart, which said, 'Doctors, transport, rural space kept open, green spaces, church, listed…' You know, whatever was important, and say how often, or how big in the topic of conversation that became."* (D4)

Therefore, those leading the decision-making process saw the rich data we presented to them as a resource to produce figures from, rather than a resource to understand, search within and discover insights. Indeed, they requested that the conversations be reduced down into more simple visualisations that could then be used as evidence: *"You could produce a graph, surely, could you, from this?"* (D5).

Impartiality and Bias

Being seen to be impartial and not biasing the nature of the conversations, or how people's experiences and talk might be interpreted and represented, were found to be issues. The community organisation that ran all of the events found themselves in a particularly difficult situation, which they often reflected on. As well as running these events as open consultations on local areas, they were hoping to attract new members to their cause (primarily around issues to do with ageing and health and care in later life): *"that was also part of the purpose."* (F1). They also relied on funding from the LA, so could not be seen to be lobbying against them in any way.

They felt that the way in which the conversations were captured during these events meant that they could simply store it on their website, allowing them to use it as evidence for future funding bids. For previous consultations they had to write up notes and summarise the key points, and thus be seen to be taking a position, of sorts, on local issues: *"If you want to, follow up, because it wouldn't be appropriate for us to"* (F1). Here the documentation was also the expression and communication of the main matters of concern.

In contrast, the organisations we worked with that had the decision-making powers in these contexts such as the Parish Council were less favourable toward the type of consultation we proposed. As noted above, some had anxieties about the open nature of the events. They also felt awkward hearing and then having to respond to other people's opinions on *"difficult decisions"* in relation to local cuts and planning decisions. They enjoyed the process, as it made their consultation *"very visible"* and looked like evidence of them taking action. However, as we already noted, they privileged easily digestible results rather than rich, diverse and potentially contrary viewpoints and lived experiences. In articulating these ideas, council members reflected back on their own past consultations. Previously, they had held an open day where they asked people to select and rank 13 'assets' in the village. While they appreciated that the *Community Conversational* event stimulated residents to discuss their local area, the data from their previous events was deemed more "useable": *"At the end of the day, at least we got a chart which said what people thought, to them* […] *they all wanted the Post Office, and they all wanted the post box."* (D4). However, while this led to an understanding of what was deemed to be a priority in the local area, council members were left unsure as to 'why' these assets were so important. In order to make sense of these, council members had constructed narratives around the findings:

> *"There are probably 13 allotments in the village, and there are 740 houses, and the people in the 740 houses wanted to be able to come down here and post a letter when they needed to. Or buy some stamps, or get their car taxed, or whatever."* (D4)

Consequently, it was clear that the main role of *Community Conversational* could be to add understanding to why these assets are considered important. During the evaluation workshops, this was evidenced in the ways the council representatives explicitly requested examples of data related to each of these predefined issues. In doing so, their engagement with the rich conversations captured from residents was limited to just a sub-set of local objects and services that they had already determined as priorities.

DISCUSSION

Our findings across all stages highlight the challenges community organisations face when carrying out consultations, where devolved decision-making powers have been entrusted to them. In the following sections we draw on some key issues; the types of data privileged by community organisations in these processes, the issues systems like ours raise around the accountability of the facilitating community organisations, and the role of 'informal' participation in local decision-making processes.

Data, Utility and Meaningfulness

The process of *Community Conversational* was such that it accumulated a lot of audio and textual data of participants' conversations during the events. Much of the rhetoric around open data and the accountability of enterprises, the state and even community organisations suggests that access to more data will give ordinary citizens more control [42]. In that paradigm, it seems reasonable to assume that community organisations should be able to make better decisions that represent the views of their communities, with access to more data about them. On one hand there were benefits of capturing the conversations. For both the community organisation facilitators, and the decision-makers this meant their work was *visible* and could be used as *evidence*, related to the consultation process. Furthermore, there are opportunities for review, archive, and dissemination. On the other hand, there are clear issues with so much data, how to make sense of it or make it meaningful to decision-makers. Furthermore, the way in which the decision-makers reacted to the data collected raises questions around the role of data (and experiences) as evidence. This dichotomy between experiential knowledge against quantitative based argument is acknowledged in other disciplines (e.g. health activism [48]). To our decision-making collaborators, often data means being able to evidence that consultation has taken place in order to demonstrate success for funding bodies, or show a LA that the community have been consulted. This does not necessarily translate to the use of this data to inform the outcomes of a consultation in ways that represent public opinion. Our decision-making collaborators talked about the events being evidence of what they have done, not what they found out.

A further question about the meaningfulness of data generated by, or representing community views, relates to the ways in which decision-makers desired data that is simple to read, easy to understand and quantitative. This was, in part, related to what appeared to be epistemological biases in terms of privileging what they saw as 'facts' and numbers over qualitative attributes. But the lack of engagement was also problematic because of the ways the groups are able to put their own narrative on these simple figures and use them to create evidence to back their cause. Our findings demonstrated that that the groups were positive toward our process because they considered it a means to make the work of 'doing' consultation visible, and in one case raised their profile to attract new members. However, the outcome of the events (a sea of data) was not considered to be meaningful, or something from which the decision-making group could ascertain meaning. They saw the utility of the data (*in order to* provide evidence of consultation), but did not share the facilitating organisation's view in seeing the meaningfulness (*for the sake of* representing public opinion) [1].

Accountability, Impartiality and Power

Recent work with civic organisations in HCI has highlighted how community representatives may lack the social capital and resources required to access certain people or places within their community, raising concerns around the democratic rhetoric that surrounds devolved decision-making (e.g. [34]). In our study, this relates to problems of representation and diversity, and is bound up in issues of accountability. The organisations we worked with invited residents to the events using their own networks. The groups they invited were not diverse in nature, and in one case represented a very narrow demographic. Such details may be left out of the evidencing and reporting on consultation work by community organisations, however, this type of detail can be made visible through the richness and veracity of the data and outcomes of civic technologies like *Community Conversational* that support the capture of 'talk'.

However, a concern raised by our work is the way in which community organisations, with exclusive access to data generated by platforms like *Community Conversational*, are able to represent that data in ways that give a sense of impartiality and neutrality. The concern here then is that decisions made might be in some way masqueraded, or that the representativeness of the consultation (or lack thereof) might be disguised. Furthermore, it speaks to issues already identified in community voting deployments around the hand-picking of abstracted, community generated data to evidence already made decisions (e.g. [63]). In other words, if the type of data collected by platforms like *Community Conversational* is presented online in full, and is easily searchable, residents or other community organisations can make visible when organisations are misrepresenting the people they are seeking to represent. With this comes questions around who should have access to this data. Harding *et al.* [30] discuss the need to focus on both the state and the citizenry, and not to look solely toward the empowerment of citizens. Our work looked at the role of community organisations in this space, as in our context, it was they who had the agency to carry out decision-making. Prior work has highlighted how the handing over of decision-making responsibility in this manner could lead to problems of bureaucracy [9], power relations [23,24], and the marginalisation of certain citizens [29]. Furthermore, they may also cause inequalities in forming new power structures, with community representatives setting their own agendas [5,22,25]. In our case, these issues were not pronounced, but there were clearly challenges associated with the ways in which representatives of decision-making organisations interpreted what was captured in the events, and placed limited value on the utterances of local residents.

Supporting and Valuing Everyday Talk

The design of our system was predicated on the idea that informal conversation and opinion-giving (or 'everyday talk' [12,31,40]) could be considered as significant contributions to local consultation processes. *Everyday Politics* [5] champions the idea that ordinary people, through civil society organisations, are fundamental to a functioning democracy. We looked to implement these concepts to scaffold a conversation about place, and to respond to issues from our initial fieldwork around equality and respect for others' views. There has been considerable research on different methods for engaging publics, most with an emphasis on deliberation as a process of 'respectfully understanding different perspectives and technical issues' [9]. We also stress the importance of deliberation as an engagement method, and while we have raised a number of problems about supporting and developing methods that promote and capture deliberative 'talk', there were also many successes. This included promoting equality within the conversations through the introduction of turn-taking, which was appreciated by the facilitating community organisation for opening up the consultation. It was also valued by the decision-making organisation as it provided new forms of hands-off facilitation and structure to consultation. The method also created opportunities for citizens to be reflective, to challenge one another and to engage each other in discussion, creating rich data about matters of local concern which has the potential to be used to promote accountability in local decision-making processes.

CONCLUSION

We have presented *Community Conversational*, a socio-technical platform designed to structure and capture conversations around place in relation to local community organisation's decision-making processes at a local level. In reporting our study, we have focused on the nature of decision-making in UK contexts where government is increasingly reliant upon community organisations to carry out consultation at a local level. Within this setting we have looked at the role that deliberative talk [21,24,40,41,61] can have in local consultation processes, placing emphasis on the need to scaffold conversations in these settings and provide ways for such talk to be captured and used as data. In doing so, we have raised questions about the accountability of community organisations, and the value of deliberative talk in consultation processes.

ACKNOWLEDGMENTS

This research was funded through the EPSRC Centre for Doctoral Training in Digital Civics (EP/L016176/1) and ESRC-led The Trust Map (ES/M003566/2). The Trust Map is funded through the Empathy and Trust in Online Communicating (EMoTICON) funding call administered by the Economic and Social Research Council in conjunction with the RCUK Connected Communities, Digital Economy and Partnership for Conflict, Crime and Security themes, and supported by the Defence Science and Technology Laboratory (Dstl) and the Centre for the Protection of National Infrastructure (CPNI). Data supporting this publication is openly available under an 'Open Data Commons Open Database License'. Additional metadata are available at: 10.17634/154300-34. Please contact Newcastle Research Data Service at rdm@ncl.ac.uk for access instructions.

REFERENCES

1. Hannah Arendt. 1958. *The Human Condition*. University of Cicago Press, Chicage.
2. Mariam Asad and Christopher A. Le Dantec. 2015. Illegitimate Civic Participation. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing - CSCW '15*, 1694–1703. https://doi.org/10.1145/2675133.2675156
3. Henry Bäck. 2002. Fragmentation and consolidation in the big city: Neighbourhood decentralisation in six Scandinavian cities. *ECPR Joint Session of Workshops*: 23–27.
4. Harry Blair. 2000. Participation and Accountability at the Periphery: Democratic Local Governance in Six Countries. *World Development* 28, 1: 21–39.
5. Harry C. Boyte. 2004. *Everyday Politics: Reconnecting Citizens and Public Life*. University of Pennsylvania Press.
6. Eva Brandt and Eva. 2006. Designing exploratory design games. In *Proceedings of the ninth conference on Participatory design Expanding boundaries in design - PDC '06*, 57. https://doi.org/10.1145/1147261.1147271
7. Eva Brandt and Jörn Messeter. 2004. Facilitating collaboration through design games. In *Proceedings of the eighth conference on Participatory design Artful integration: interweaving media, materials and practices - PDC 04*, 121. https://doi.org/10.1145/1011870.1011885
8. Virginia Braun and Victoria Clarke. 2006. Using thematic analysis in psychology. *Qualitative Research in Psychology* 3, 2: 77–101.
9. Michael M Burgess. 2014. From "trust us" to participatory governance: Deliberative publics and science policy. *Public understanding of science (Bristol, England)* 23, 1: 48–52. https://doi.org/10.1177/0963662512472160
10. Simone Chambers. 2001. Constitutional Referendums and Democratic Deliberation. In *Referendum Democracy*. Palgrave Macmillan UK, London, 231–255. https://doi.org/10.1057/9781403900968_12
11. Fiorella De Cindio and Cristian Peraboni. 2011. Building digital participation hives: towards a local public sphere. In *From social butterfly to engaged citizen : urban informatics, social media, ubiquitous computing, and mobile technology to support citizen engagement*, Marcus Foth, L Forlano, C Satchell and M Gibbs (eds.). MIT Press, Massachusetts.
12. Pamela Johnston Conover and Donald D Searing. 2005. Studying "Everyday Political Talk" in the Deliberative System. *Acta Politica* 40, 3: 269–283.
13. Clara Crivellaro, Rob Comber, John Bowers, Peter C. Wright, and Patrick Olivier. 2014. A pool of dreams. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems - CHI '14*, 3573–3582. https://doi.org/10.1145/2556288.2557100
14. Clara Crivellaro, Rob Comber, Martyn Dade-Robertson, Simon J. Bowen, Peter C. Wright, and Patrick Olivier. 2015. Contesting the City. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 2853–2862. https://doi.org/10.1145/2702123.2702176
15. Clara Crivellaro, Alex Taylor, Vasillis Vlachokyriakos, Rob Comber, Bettina Nissen, and Peter Wright. 2016. Re-Making Places. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 2958–2969. https://doi.org/10.1145/2858036.2858332
16. Christopher A. Le Dantec, Mariam Asad, Aditi Misra, and Kari E. Watkins. 2015. Planning with Crowdsourced Data. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing - CSCW '15*, 1717–1727. https://doi.org/10.1145/2675133.2675212
17. Christopher Le Dantec. 2012. Participation and publics. In *Proceedings of the 2012 ACM annual conference on Human Factors in Computing Systems - CHI '12*, 1351–1360. https://doi.org/10.1145/2207676.2208593
18. DCLG - Department for Communities and Local Government. 2011. *Localism Act*. Local Government Association, Local Government House, Smith Square, London, SW1P 3HZ, 020 7664 3000, http://www.local.gov.uk, info@local.gov.uk.
19. Nicholas Diakopoulos and Mor Naaman. 2011. Towards quality discourse in online news comments. In *Proceedings of the ACM 2011 conference on Computer supported cooperative work - CSCW '11*, 133. https://doi.org/10.1145/1958824.1958844
20. Carl DiSalvo, Jonathan Lukens, Thomas Lodato, Tom Jenkins, Tanyoung Kim, Carl DiSalvo, Jonathan Lukens, Thomas Lodato, Tom Jenkins, and Tanyoung Kim. 2014. Making public things. In *Proceedings of the 32nd annual ACM conference on Human factors in computing systems - CHI '14*, 2397–2406. https://doi.org/10.1145/2556288.2557359
21. James Fearon. 2000. Deliberation as Discussion. In *Deliberative Democracy*, Jon Elster (ed.). Cambridge University Press, Cambridge, 44–69.
22. Frank Fischer. 2006. Participatory Governance as Deliberative Empowerment: The Cultural Politics of Discursive Space. *The American Review of Public Administration* 36, 1: 19–40. https://doi.org/10.1177/0275074005282582
23. Bent Flyvbjerg. 1998. *Rationality and Power: Democracy in Practice*. University of Chicago Press.

24. Archon Fung. 2008. Minipublics: Deliberative Designs and Their Consequences. In *Can the People Govern? Deliberation, Participation and Democracy*, Shawn W. Rosenberg (ed.). Palgrave Macmillan, New York, 159–183.
25. Archon Fung and Erik Olin Wright. 2003. Thinking about empowered participatory governance. *Deepening Democracy: Institutional Innovations in Empowered Participatory Governance*: 3–42.
26. Sarah Gallacher, Connie Golsteijn, Lorna Wall, Lisa Koeman, Sami Andberg, Licia Capra, and Yvonne Rogers. 2015. Getting quizzical about physical. In *Proceedings of the 2015 ACM International Joint Conference on Pervasive and Ubiquitous Computing - UbiComp '15*, 263–273. https://doi.org/10.1145/2750858.2807529
27. Connie Golsteijn, Sarah Gallacher, Licia Capra, and Yvonne Rogers. 2016. Sens-Us. In *Proceedings of the 2016 ACM Conference on Designing Interactive Systems - DIS '16*, 39–49. https://doi.org/10.1145/2901790.2901877
28. Eric Gordon, Becky E. Michelson, and Jason Haas. 2016. @Stake: A Game to Facilitate the Process of Deliberative Democracy. In *Proceedings of the 19th ACM Conference on Computer Supported Cooperative Work and Social Computing Companion - CSCW '16 Companion*, 269–272. https://doi.org/10.1145/2818052.2869125
29. Amy Gutmann and Dennis Thompson. 2009. *Why Deliberative Democracy?* Princeton University Press.
30. Mike Harding, Bran Knowles, Nigel Davies, and Mark Rouncefield. 2015. HCI, Civic Engagement & Trust. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 2833–2842. https://doi.org/10.1145/2702123.2702255
31. Gerard A. Hauser and Chantal Benoit-Barne. 2002. Reflections on Rhetoric, Deliberative Democracy, Civil Society, and Trust. *Rhetoric & Public Affairs* 5, 2: 261–275.
32. Jens Villiam Hoff, Henrick Bang, and Katinka Hauxner. 2001. Bydelsrådene i København: En synkende skude lastet med nærdemokratiske udfordringer. *Kbh.: Center for offentlig organisation og styring.* 1.
33. Craig. Johnson. 2003. Decentralisation in India: poverty, politics and Panchayati Raj. *London: Overseas Development Institute*.
34. Ian G. Johnson, John Vines, Nick Taylor, Edward Jenkins, and Justin Marshall. 2016. Reflections on Deploying Distributed Consultation Technologies with Community Organisations. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 2945–2957. https://doi.org/10.1145/2858036.2858098
35. Juho Kim, Eun-Young Ko, Jonghyuk Jung, Chang Won Lee, Nam Wook Kim, and Jihee Kim. 2015. Factful. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 2843–2852. https://doi.org/10.1145/2702123.2702352
36. Juho Kim, Eun-Young Ko, Jonghyuk Jung, Chang Won Lee, Nam Wook Kim, and Jihee Kim. 2015. Factful. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 2843–2852. https://doi.org/10.1145/2702123.2702352
37. Lisa Koeman, Vaiva Kalnikaité, and Yvonne Rogers. 2015. "Everyone Is Talking about It!" In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 3127–3136. https://doi.org/10.1145/2702123.2702263
38. Seunghyun "Tina" Lee, Yilin Elaine Liu, Ljilja Ruzic, and Jon Sanford. 2016. Universal Design Ballot Interfaces on Voting Performance and Satisfaction of Voters with and without Vision Loss. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 4861–4871. https://doi.org/10.1145/2858036.2858567
39. Cristiano Maciel, Licínio Roque, and Ana Cristina Bicharra Garcia. 2009. Democratic citizenship community: a social network to promote e-deliberative process. In *Proceedings from the 10th Digital Government Society of North America*, 25–34. Retrieved April 28, 2015 from http://dl.acm.org/citation.cfm?id=1556176.1556187
40. Jane Mansbridge. 1999. Everyday talk in the deliberative system. In *Deliberative Politics: Essays on Democracy and Disagreement.*, Stephen Macedo (ed.). Oxford University Press, Oxford. Retrieved June 26, 2015 from http://philpapers.org/rec/MANETI-2
41. Jane Mansbridge, James Bohman, Simone Chambers, Thomas Christiano, Archon Fung, John Parkinson, Dennis Thompson, and Mark E Warren. 2012. A systemic approach to deliberative democracy. In *Deliberative Systems: Deliberative Democracy at the Large Scale*, John Parkinson and Jane Mansbridge (eds.). Cambridge University Press, Cambridge, 1–26.
42. Matthew Marshall, David S. Kirk, and John Vines. 2016. Accountable. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 1620–1631. https://doi.org/10.1145/2858036.2858301
43. Donald McMillan, Arvid Engström, Airi Lampinen, and Barry Brown. 2016. Data and the City. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 2933–2944. https://doi.org/10.1145/2858036.2858434

44. Giles Moss and Stephen Coleman. 2013. Deliberative Manoeuvres in the Digital Darkness: e-Democracy Policy in the UK. *The British Journal of Politics & International Relations* 16: 410–427. https://doi.org/10.1111/1467-856X.12004
45. Andreas Novy and Bernhard Leubolt. 2005. Participatory budgeting in Porto Alegre: Social innovation and the dialectical relationship of state and civil society. *Urban Studies* 42, 11: 2023–2036. https://doi.org/10.1080/00420980500279828
46. Alenka Poplin. 2012. Playful public participation in urban planning: A case study for online serious games. *Computers, Environment and Urban Systems* 36, 3: 195–206. https://doi.org/10.1016/j.compenvurbsys.2011.10.003
47. Lee Rainie and Aaron Smith. 2012. Politics on social networking sites. *Pew Internet and American Life Project*.
48. Sunil Rodger, John Vines, and Janice McLaughlin. 2016. Technology and the Politics of Mobility. In *Proceedings of the 2016 CHI Conference on Human Factors in Computing Systems - CHI '16*, 2417–2429. https://doi.org/10.1145/2858036.2858146
49. Joanna Saad-Sulonen. 2012. The Role of the Creation and Sharing of Digital Media Content in Participatory E-Planning. *International Journal of E-Planning Research* 1, 2: 1–22. https://doi.org/10.4018/ijepr.2012040101
50. Joanna Saad-Sulonen and Liisa Horelli. 2010. The value of Community Informatics to participatory urban planning and design: a case-study in Helsinki. *The Journal of Community Informatics* 6, 2.
51. Michael Saward. 2008. Representation and Democracy: Revisions and Possibilities. *Sociology Compass* 2, 3: 1000–1013. https://doi.org/10.1111/j.1751-9020.2008.00102.x
52. Michael Saward. 2008. Making Representations: Modes and Strategies of Political Parties. *European Review* 16, 3: 271–286. https://doi.org/10.1017/S1062798708000252
53. Sabrina Scherer and Maria A. Wimmer. 2014. Trust in e-participation. In *Proceedings of the 8th International Conference on Theory and Practice of Electronic Governance - ICEGOV '14*, 61–70. https://doi.org/10.1145/2691195.2691237
54. Ronald Schroeter. 2012. Engaging new digital locals with interactive urban screens to collaboratively improve the city. In *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work - CSCW '12*, 227. https://doi.org/10.1145/2145204.2145239
55. Ronald Schroeter. 2012. Engaging new digital locals with interactive urban screens to collaboratively improve the city. In *Proceedings of the ACM 2012 conference on Computer Supported Cooperative Work - CSCW '12*, 227. https://doi.org/10.1145/2145204.2145239
56. Bryan C. Semaan, Scott P. Robertson, Sara Douglas, and Misa Maruyama. 2014. Social media supporting political deliberation across multiple public spheres. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing - CSCW '14*, 1409–1421. https://doi.org/10.1145/2531602.2531605
57. Bryan C. Semaan, Scott P. Robertson, Sara Douglas, and Misa Maruyama. 2014. Social media supporting political deliberation across multiple public spheres. In *Proceedings of the 17th ACM conference on Computer supported cooperative work & social computing - CSCW '14*, 1409–1421. https://doi.org/10.1145/2531602.2531605
58. Bryan Semaan, Heather Faucett, Scott Robertson, Misa Maruyama, and Sara Douglas. 2015. Navigating Imagined Audiences. In *Proceedings of the 18th ACM Conference on Computer Supported Cooperative Work & Social Computing - CSCW '15*, 1158–1169. https://doi.org/10.1145/2675133.2675187
59. Bryan Semaan, Heather Faucett, Scott P. Robertson, Misa Maruyama, and Sara Douglas. 2015. Designing Political Deliberation Environments to Support Interactions in the Public Sphere. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 3167–3176. https://doi.org/10.1145/2702123.2702403
60. Keith Shaw and Mark Tewdwr-Jones. 2016. "Disorganised Devolution": Reshaping Metropolitan Governance in England in a Period of Austerity. *Raumforschung und Raumordnung*: 1–14. https://doi.org/10.1007/s13147-016-0435-2
61. Marco R Steenbergen, André Bächtiger, Markus Spörndli, and Jürg Steiner. 2003. Measuring Political Deliberation: A Discourse Quality Index. *Comparative European Politics* 1, 1: 21–48. https://doi.org/10.1057/palgrave.cep.6110002
62. Alex S. Taylor, Siân Lindley, Tim Regan, David Sweeney, Vasillis Vlachokyriakos, Lillie Grainger, and Jessica Lingel. 2015. Data-in-Place. In *Proceedings of the 33rd Annual ACM Conference on Human Factors in Computing Systems - CHI '15*, 2863–2872. https://doi.org/10.1145/2702123.2702558
63. Nick Taylor, Justin Marshall, Alicia Blum-Ross, John Mills, Jon Rogers, Paul Egglestone, David M. Frohlich, Peter Wright, and Patrick Olivier. 2012. Viewpoint. In *Proceedings of the 2012 ACM annual conference on Human Factors in Computing Systems - CHI '12*, 1361. https://doi.org/10.1145/2207676.2208594
64. Vasilis Vlachokyriakos, Rob Comber, Karim Ladha,

Nick Taylor, Paul Dunphy, Patrick McCorry, and Patrick Olivier. 2014. PosterVote: Expanding the Action Repertoire for Local Political Activism. In *Proceedings of the 2014 conference on Designing interactive systems - DIS '14*, 795–804. https://doi.org/10.1145/2598510.2598523

65. Vasilis Vlachokyriakos, Paul Dunphy, Nick Taylor, Rob Comber, and Patrick Olivier. 2014. BallotShare: An exploration of the design space for digital voting in the workplace. *Computers in Human Behavior* 41: 433–443.
66. Poornima Vyasulu and Vinod Vyasulu. 1999. Women in Panchayati Raj: Grass Roots Democracy. *Economic and Political Weekly* 34, 52: 3677–3686.
67. C. W. Watson. 1999. *Being There: Fieldwork in Anthropology*. Pluto Press.
68. Lu Xiao, Weiyu Zhang, Anna Przybylska, Anna De Liddo, Gregorio Convertino, Todd Davies, and Mark Klein. 2015. Design for Online Deliberative Processes and Technologies. In *Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems - CHI EA '15*, 865–868. https://doi.org/10.1145/2702613.2727687